1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

512 the horizon. There is no chanting as in the villages of the Xingu, no whistling, no marching to the river for an early bath. There is no conversation, no motion. After a while a dog may sit up and watch the world as silently as his master. More and more of the recumbent figures sit up; some old man becomes busily engaged in making string; a woman gives suck to a baby; others rise, and, walking with heads [372] high, chests thrust forward, go toward the bushes, to reappear soon with armfuls of wood and quickly start fires with their laurelwood fire drills. Soon everyone is sitting up, and the cheesecloth tents disappear. A few women huddle around the fires.

It is only when the wind resumes its violent blowing that the camp is stirred into activity. The chilliness of the night is forgotten, reverential thoughts are discarded. The vulgar stomach, however, is re- 512 membered. Preparations are made to take care of its daily needs. 225 Bows and arrows are examined. A harpoon arrow for turtles and 462 crocodiles, a fish arrow, a gourd, and if the hunter possesses one, a knife, comprise the equipment. Then the men go to their canoes two by two, though a young boy may be taken along to make three. He too must learn to satisfy the daily craving of his inner machinery. The hunters paddle away upstream and disappear around the bend of the river.

512 The women prepare for their own voyages. Sometimes they ac- 222 company the men, sometimes they go alone in a canoe or go inland. 462 They carry baskets on their backs suspended from the forehead by a strap. Each woman carries a digging stick. Little girls accompany them, with their little baskets and their own digging sticks, in imitation of the grown-ups. Some women carry babies astride the hip, 291 feeding at the large full breasts. Naked but for a loin covering, with hair falling down their backs, they seem to fit the wild landscape. Some may wear a camisole, but that is only a thin veil, and their bodies are seen underneath. The loin covering is tied at the back, and, as they walk with chests thrown forward and high, resembles a huge tail rolled under the camisole. Their smooth-skinned ape appearance is graceful but amusing; the naked ones fit the picture better.

512 At camp are left only the old people and some young ones who 461 are too lazy to go out or have been hunting hard and need a rest. They are soon busy fixing bows and arrows, making string, carving ornaments, weaving basketry, taking care of very young children. There is very little talking and no fussing. They almost ignore each other. Those who stay at home will wait patiently for their dinner. They will watch the sun climb the heavens, and they will move from one side of the branches to the other to keep in the shade. Beaten by the wind which by noon blows a gale, bombarded by

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

512 rejoice, for they know that Kuma, the goddess creator of all things,
519 is content with them and is sending them a greeting in token thereof.
796 On the wings of the wind comes the roar of the araguatos.

But life starts in the east and ends in the west. The day is done and the night comes on. The Yaruros turn to face the east to watch
821 the beginning of star travel and also the fiery appearance of the
796 moon and its transformation to a chaste white. The sands glisten and above flash "falling stars", but the Yaruros say that these are messengers of Kuma doing their errands.

512 Then the women roll cigars, light them, and pass them to their men.
296 Everyone smokes and there is great contentment. There is reluctance
462 to stand up, so if a woman has to fetch some object, say a firebrand,
[576] she will crawl on all fours, looking not unlike some large but indescribably graceful ape.

When several stars of the big dipper have appeared the women
512 rise in a body and walk into the darkness west of the camp. They
462 disappear from sight and hearing. What mysteries they perform they only know. The men are left alone and they talk about heaven. The children play merrily.

The women return and quietly take their places, ready to prepare more cigars. It is good to lie naked on the sand looking at the sky,
1000 listening to nature's symphony. With the same persistent effortless rhythm of the pulse beat the world outside of the individual is felt. There is the merry laughter of the children and the soft, deep, contented gurgle of the women; the soft voice of the shaman painting religious pictures, explaining existence; the murmur of the wind as a background to the calls of night birds, and the blowing of toninos, the splash of frolicsome fishes, the intermittent howl of the monkeys, the bark of the wolf, the roar of the jaguar; and the warmth of a full stomach.

512 A figure may detach itself from the camp shadows and disappear
796 in the darkness of the west. Several young men may afterwards take the same path—to join the shaman in his preparations for communion with the gods. They leave behind them a feeling of expectation but nothing is said. Someone has put up a bare pole where the sand is hard packed.

796 The shaman returns and goes to sit in front of the pole facing the
791 east. He sits quietly and alone in deep reverie. Later he may ask for a cigar. His wife will supply him with one.

After a period of contemplation he may begin to sing and dance. His people will join him. The music will become more and more animated, the singing and dancing will be done with increasing abandon. The stars and the moon will go their ways to rest in the west.
512 It is only when the sun peeps over the eastern horizon that they will

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

772 considered to be their ancestorial relatives; that once upon a time
[173] the Yaruros were very many and now very few; that the Yaruros had been visited with great calamities the preceding year, and many of their people had died through sickness and other destructive forces.

123 Also, I learned that, though I could gather inklings of a rich spiritual culture and a good cross section of the material phases from this band, I had to go farther down river to meet the spiritual leaders of the remnants of this race if I wanted to reach the heart of the Yaruros' religion, cosmology, mythology, and ethics.

791 In all of the primitive groups with which I have come in contact,
123 certain individuals are recognized as the leaders and authorities, especially on such matters as religion and social organization. The younger people hesitate and often refuse to discuss such matters altogether, but age alone is not enough to qualify an individual as the mouthpiece of the group. The Yaruros were no exception. As soon as they grasped that I wanted to know a great deal about their history and culture they urged me to talk to "Landaeta", their leader and great "musico" or shaman. He, with his family, was hunting on the lower Capanaparo. They offered to guide me to him. Accordingly, we journeyed downstream by moonlight to avoid the heat of the day, and as I subsequently discovered, to avoid meeting with crocodile hunters.

361 About noon the next day we sighted several empty canoes drawn up
482 on the bank, and knew that there must be more Yaruros nearby. We
462 landed on the sandy beach and awaited their return. They came early in the afternoon, the men carrying turtles and crocodiles slung on poles, the women with baskets filled with changuango, leaning forward as they walked, looking not unlike grotesque apes under their heavy loads; and also, little children carrying their share of food,
[152] straggling behind. Upon seeing me they were frightened, but did not run away.

123 My Yaruro paddlers acted the part of mediators perfectly, for soon afterwards we were all embarked and moving downstream to join the main body of Landaeta's band which, I was told, was encamped
[152] several miles downstream. Their good humor almost amounted to
462 gaiety. The three canoes moved steadily down the river, the men paddling hard, and the women sitting quietly and casting shy inquisitive glances in my direction.

361 We found Landaeta and his people on a large exposed wind-swept beach. There was the white sand, the strong wind blowing from the east raising it into dust clouds, and the intense glare from river and sand; a few water jars, a few baskets, several refuse heaps with buzzards feeding at them, canoes drawn up on the beach, and some

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

The sense of strict inviolability of personal rights carries over to personal services. Never did a husband order his wife to do anything outside of her proper domain. While I lived with them, in spite of the excellent care they gave me, even to the point of anticipating my wishes in a great many cases, never did a husband request his wife to prepare food for me. He asked her if she would, acting merely as my messenger. No closer relationship can exist than between maternal uncle and nephew, yet even he does not feel free to ask any service of his nephew, nor to take the latter's personal property.

DIVISION OF LABOR

Sexual dichotomy in economic activities is clearly defined. In a general way, it may be said that the rougher, harder, and more dangerous work belongs in the province of male activity and that there is no task which calls for strength or danger that properly belongs in the realm of woman's activity. Should any woman be engaged in a hard or dangerous piece of work and a man happens to be present there is a tacit assumption of the task by the latter. Hunting and fishing and presumably the act of fighting in war are man's tasks. The gathering of roots, fruits, seed, and their preparation belongs to the women. It is interesting to note that the gathering of honey, which entails some risk, is done by the men. The making of canoes, the making of implements, of hammocks, the activities in making camp are all in man's domain. The preparation of food and the making of pottery and basketry are woman's tasks.

HUNTING AND FISHING

Hunting and fishing are male occupations exclusively. As soon as the young boy is able to toddle about he is made to play with bow and arrow and learns to make these indispensable tools. It is a common sight to see little boys who are too young to be taken along by the men on hunting expeditions playing at the game of hunting; and when a man is in camp busily preparing his hunting equipment his young son is by his side working industriously on miniature bows and arrows.

The equipment of the hunter is simple. Bow, arrow, and canoe are indispensable. A Yaruro does not like to roam on land, but there is no need for him to do so since he can get his game in the watercourses or along their banks. So he sets off in the early morning, generally accompanied by his hunting companion, to look for crocodile (*Crocodilus babu*). He will hunt for other forms of life only reluctantly, having a special liking for crocodile meat.

Because of the shyness of crocodile the hunter is most often forced to shoot at it from a distance. Since an arrow will seldom kill one

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

iron hoe, which is also made by the Yaruro out of any heavy scrap of iron that they may gather. Sometimes they will work for the ranchers and with their earnings purchase this type of hoe from a trader. However, such a digging tool is quite a luxury and sharpened sticks are more common.

MORTARS AND PESTLES.—During the rainy season, the Yaruros gather chigua, a seed, which they dry and pound into flour. Mortars of wood shaped as shown in figure 20, *a*, *b*, are used and the pestle is any ordinary hard stick.

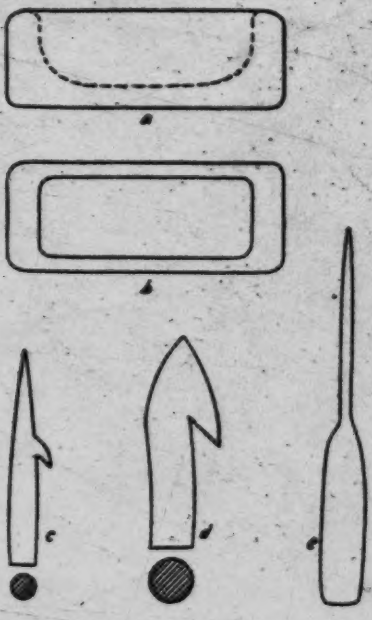

FIGURE 20.—*a*, *b*, Wooden mortar. *c*, Bone or iron point used for hunting chiguire. *d*, Hook used for manatee. *e*, Cooking paddle.

COOKING LADLES.—These are small wooden paddles used in cooking, especially when meat is boiling in a pot (fig. 20, *e*).

HAMMOCKS.—The Yaruros prefer to sleep on the sands, especially during the dry season. The men make hammocks, however, small ones generally used by children as cradles, and by the women shamans when they sing, during the day. During the rainy season they may employ them for sleeping.

The fiber employed to make the hammock string comes from the moriche leaf. The string may be very fine, of course, depending on the interest of the maker. It is made by the men. To weave the hammock a loom is made of two poles thrust into the sand to which are fastened two crosspieces at both the top and bottom. The string is then wound around these crosspieces. The weaver employs a knotter's netting technique. When the entire hammock has been woven the weaving is held in place by another string thrust through one of the woven rows.

ROPE.—The fiber mostly employed by the Yaruros is taken from the leaf of the moriche and the macanilla. The inner cortex of the leaf is stripped off and dried and then is taken apart strand by strand. These long fibers are then moistened and twisted together in two's and th..e's into a string by rolling them on the thigh with the palm of the hand. A stronger string is made in the same way and used for making hammocks. The bow strings are made from the fiber of the macanilla.

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

291 177 after I had been among the Yaruros for a time the women often discarded their camisoles, even though I were present.

291 286 462 The men would normally wear a breechclout which originally was woven by the women from the fibers of the moriche palm leaf, but now it consists of a piece of cloth. Formerly the women wove wide belts of the same fiber for the men, but this is no longer done. The breechclout is held in place by a string tied around the waist.

291 287 The women, underneath their camisoles, still wear the old-fashioned Yaruro girdle, which is made from the fibers of the moriche palm. The fibers, which are about 2 feet long, are fastened together at one end. This end is slipped through a hair rope tied around the waist, and the whole mass of fibers passes between their legs and under the waist string. Plate 25, 4, shows a Yaruro woman wearing one of these girdles. It is fastened in such a way that an enormous knot is formed in the rear, and when wearing their camisole the women have the appearance of sporting large tails.

562 291 301 The women on the whole seem to be more conservative than the men in their clothing and body decorations. Below the knees and around the ankles they wear a thin string, and often they have necklaces of carved asabache figures, which are shown in plate 21.

DELOUSING TOOL

412 515 An implement that is in great vogue is the delousing tool shown in plate 20, 2. The serrated end is used as a comb to expose the lice, which are seized between the fingers and crushed between the teeth. The pointed end is employed to crush blisters raised on the body by 462 302 mosquito bites. These tools, also fashioned by the men, are used exclusively by the women to groom their menfolk and each other.

CARRYING NETS

482 286 854 Carrying nets, of the knotless variety, are woven and used to carry children and food. When carrying children the net is slung across the chest from one shoulder; when carrying food it is supported by the hea

COOKING

252 462 The culinary art among the Yaruro is poorly developed. Much of the fruit and the eggs are eaten raw. Fish is eaten half raw and the meat of the crocodiles and turtles is merely warmed over the fire. Sometimes the meat is boiled. In the afternoon the women who have gathered firewood are to be found in camp waiting patiently for the men. On the hot coals they will have eggs and changuango. If the hunt is successful, and no hunt is considered

1 [see category 116, and plate 15, — Analyst]

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

successful if the men do not come back with a number of crocodiles, the men build larger fires, upon which the crocodiles are laid. As the hide cracks the animals are split open, the meat is stuck on spits and upon reaching a stage of being warm it is eaten. Contrary to popular ideas that crocodile eaters only consume the tail, the Yaruro eat the entire animal but stop short at the entrails, which are thrown to the dogs. However, they accuse the neighboring Guahibos of eating the entrails as a special delicacy. Turtle meat and eggs are often boiled.

Salt is known to these people but it is by no means considered an indispensable condiment in their food. In the only historical reference we have to the Yaruros they are referred to as clay eaters. Today, even though they are in occasional touch with civilized communities, the salty clay banks are still their only source of supply for salt. The food is generally eaten saltless, since they have no means of purchasing salt from the Racionales and they do not know how to make salt from the clay. As a result, they obtain the amount of salt necessary to life by chewing clay which they pick up in their wanderings over the plains. Food which I prepared with salt was always left untouched by them as being unsavory. In this respect, therefore, they act like the cattle and the deer which can be seen over the plains licking salt clay banks.

STORING OF FOOD

The only foods that can be kept for any length of time in the lowland tropics are the roots and seeds. In the rainy season even this is impossible. The Yaruros during the dry season leave caches of changuango on various sandbars. They dig pits into which they place the roots. The hole then is filled and soon the wind will leave no mark indicating that the sand has been disturbed. In some cases where the landmarks are plain, and the Yaruros expect to return in a day or two, no markers are placed anywhere. But if they expect to be delayed, or the sandbar is so large that they might forget the exact spot of the cache, they will thrust a stick into the ground at some distance away. Apparently by sighting with this stick and some other chosen point, they are able to locate the food store. However, on a number of occasions I saw the Yaruros march to a place on the sands with certitude and excavate changuango. In such cases I saw no markers.

In similar fashion they may store turtle eggs, provided they expect to return within a few hours. Baskets and other objects may also be left in the sand, to be retrieved when they are needed. Asabache, which is found in certain localities, may be gathered in quantities and stored until it is to be used.

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

pole in a circle but merely move forward and backward. During the performance it is prohibited for anyone to pass by the head of the sick person. The shaman will sing all night and if by morning the sick person has not shown any marked improvement the woman shaman will lie in a hammock with her head pointing to the east and will continue the singing. Other women will sit in the hammock with her and sing all day long. I myself underwent such attention. If the wife shows little interest in the welfare of her husband it is concrete proof that she does not love him and it is believed he will die. In this there are two factors to be considered from my observation of these people. The first is that a lack of wifely interest is the equivalent of bad medicine and that the husband himself will feel so disconsolate that all desire to live will be lost.

If the sick person dies during the night nothing is done except to stop the singing and dancing. At daybreak his people will drink vast quantities of chica and prepare for the funeral rites. If the sick person happens to be a woman in her menstrual period it is important to note that she is in the care of the woman shaman. The man shaman does not dare to sing to her.

In the morning the dead person is washed by the women and the body is wrapped in a hammock and taken to the burial place. The brothers and the uncles carry the body. The father and mother do not accompany the body to the grave, but in the case of a married man the widow does. The body is interred in the hammock with the head pointing to the east. The bow and arrows, whatever clothing he may have possessed, and any equipment are buried with him, but neither food nor water is necessary. The night after the burial there is a feast in the camp, but the taboo on fish is observed by everyone. The shaman and the people will sing the equivalent of:

The dead one died here, now he has arrived in the Land of Kuma, and there he has been made young again (if a child dies, it becomes a young man or woman, according to the sex). He will know nothing but joy now and will have everything he may desire.

The widow goes on a strict diet for four days. All fires which were burning at the time of the death of the individual are put out and fresh ones are built. On the fourth day the two men, who have put the dead body into the pit, and the widow, bathe; they fast on the fifth. On the fifth night the shaman sings in order to find out if the dead person has reached Kuma, if he has been given a new name, if he has been made young, strong, and rich. For a month after this the widow keeps a strict diet and she is not married for a long time. It is believed that if a man marries a widow soon after her husband has died he will die soon of the same sickness.

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

LIFE AFTER DEATH

761 775 To the modern Yaruro death is a desirable event. It holds great promise rather than terror for him. He believes that the dead will continue to live in the Land of Kuma. That is, in the land of the Mother Goddess, where he will be restored to a life of pristine happiness in the world which is identical with that which existed before the coming of the white man. In that world, in the Land of Kuma, he will have freedom to hunt if he pleases, he will have an abundance of food, he will have horses, cattle, and tobacco. He will lead a life of eternal bliss, watching over the affairs of his relatives and descendants on this earth, visiting them occasionally through the shaman and conversing with them. Apparently his only wish is that his people will die and join him in the Land of Kuma at the earliest possible time. A better idea of this life after death can be obtained by turning to the chapters on the shamanistic performances and legends.

PLAY

522 152 The spirit of play is known to the Yaruros. In fact, they laugh so much and so often that one might get the impression that they take life very lightly. For instance, their response to any accident is laughter. A man may fall out of his canoe or hurt himself in some way, or a woman may break a pot; any such accident is taken as a fine joke by everyone else.

616 606 There is inner-moiety and joking relationship, but members of one moiety do not play pranks on members of the other moiety. In fact, even in camp the mother-in-law will keep aloof from any levity engaged in by the son-in-law, and vice versa.

533 535 524 In the dancing and singing there is gaiety, especially when Puaná visits his people. Then is a time for much laughter and joking. However, there is no formalized play among the Yaruros. Anciently it is reported that the Otomacos had a ball game. Gilii has given us a description of it.[8]

857 462 861 The most common form of play among the children is an imitation of the activities of the grown-ups. The little boys will pretend that they are hunting and fishing or canoeing; the little girls will pretend that they are making pottery, basketry, or painting their bodies. The toys which the children use are miniature implements of hunting and food gathering. The only objects made differently for children to play with which are not an imitation of anything used by the adults are small clay figures representing human beings. These are arranged by the child in imitation of human beings dancing around

524 323 532

[8] If the Yaruros knew this ball game they have forgotten it since then.

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

535 linked, kept up rhythmic motion by bending the knees slightly and leaning forward. The men bent at the waist until the torso was horizontal, arms hanging down like apes, and made the same motion by bending at the knees. The motion was so very apelike that I wondered if the monkeys didn't enter in some way into the scheme of things. I was told that formerly they were people and when the flood came they climbed to the tops of trees, and have continued to live there ever since, gradually changing shape. When the circuiting around the pole began the men followed one another after the shaman, and the women made the outer circuit with the right hand on the shoulder of the woman in front. The right foot was stamped on the off beat.

ART

184 517 Of the arts, dancing, music, carving, painting, modeling, and perhaps drama, are present among the Yaruros. Every individual in the group participates in some form of artistic expression, even in connection with objects whose function is practical rather than aesthetic; each individual attempts to make them "tsaimui", that is "pretty", "good." Great care is taken in making baskets, pottery, arrows, and bows. Singing and dancing are universally practiced also. No individual feels that his voice is too poor to participate in 531 the singing and no individual is shy about dancing. However, social 462 custom limits the activities of the men and women in the plastic arts. 323 Pottery making is the prerogative of the women. The carving of stamps and realistic figures from the asabache is done by the men. The low relief carvings on gourd rattles are the special products of the shamans. Of all these activities it is this last that comes closest to being inspired.

531 285 The making of baskets is woman's work. They take great pride in their workmanship, and make a conscious effort to reproduce various designs by employing several weaves. The patterns are rather limited, but then this may be due to the limited number of baskets which they make (fig. 21).

531 323 Pots are frequently broken in transport, but there is also very little use for them. One or two pots per family are all that is required. The porousness of the material is desired in order to keep the water cool. These pots are generally decorated with crude broad bands of red paint. The pottery decoration is reproduced in figure 22.

531 322 The women like to paint their faces. For this purpose the men make wooden stamps (pl. 22, *1*), which are dipped in red-ocher paste or a blue dye and the design is impressed upon the face. The designs are entirely geometric and rectilinear.

301 317 The asabache figures are of special interest because of their remarkable realism. The asabache is a black igneous material found

1: Petrullo E-3 (1933-34) 1939 SS19 Yaruro SS19

534 177 ter the harp is very popular. Flutes and whistles are also made by the Llaneros, but the gourd rattle, which consists of a small gourd containing coarse grains of sand, or seeds, is the instrument employed by the Yaruro shaman. Music, therefore, is produced by singing to the accompaniment of the rattle if the singer happens to be the [512] shaman. Since the men are prohibited from singing and whistling during the daytime there is no freedom of expression in this way. During the entire time that I stayed with these people I never heard anyone begin a song except the shaman. Whenever, for purposes of recording, I asked some of the men to hum some of the tunes they refused to do so.

533 Although there are a variety of tunes, the music apparently consists of one phrase repeated four times for each stanza of the song. Each stanza is begun in a high falsetto. The second phrase is sung an octave lower, and the last phrase, therefore, is four octaves lower [462] than the first. The woman shaman, however, has a song slightly different than the male shaman's song and their pattern seems to begin at the lower end of the scale for each phrase and repeating each phrase in the same range as the first. In both cases, each phrase covers the entire scale of six notes. The tempo is 1–2 time, with the accent on the off-beat, but at the height of the ceremonies the songs are syncopated. The intensity of the songs, the melodious quality of the phrases, and the oral repetition produces an effect similar to the negro spirituals.

It is difficult, if not impossible, for one to sing in tune with the Yaruros. Their scale is different from ours and they seem to have quarter tones. In addition to this peculiarity, they never seem to sing in a full voice, not in a falsetto, but in a style of their own, difficult for one trained in European music to master quickly. Of course the theory is that it is the gods and the ancestral spirits who composed both the music and the words and the people singing behind the shaman merely imitate these inspired songs.

533 535 The Yaruros have only one word to signify dancing and singing: "tohiwahimerekidi". The shaman, who is the leader in both these arts, is called "dancer" or "singer." In actual practice dancing is subordinate to singing, much as gesturing is subordinate to speaking among ourselves. Perhaps the correct translation of this word would be closer if rendered as "singing."

Dancing as an independent art does not exist. When it is practiced it is almost an outflow of singing. Singing may be done without dancing but dancing without singing is impossible. Every dancer sings, though every singer does not necessarily dance.

50% of the diet or a little less. The ideal figures would again be reduced, on the other hand, by allowing for the predations on gardens of animals, especially the pigs, which eat manioc and corn, the Guahibo Indians who allegedly steal sugar cane, and insect losses. Our figures, then, will be modified only a few units by the additional sources of foods. We may thus revise our population figure to between 100 and 105 (or, if a 10-year fallow period is assumed, the figure would be 75-80), figures which correspond to the Yaruro's own ideal of what a proper population for this area should be. If the population increased beyond this number of people, the Yaruro would have to exploit their gardens at a rate greater than the rate of land reconstitution, and also expand hunting, fishing, and gathering beyond the average long-term carrying capacity of the savanas and the rivers, thus reducing their potential productivity. Adding together the maximum populations supportable by these food resources, as well as by the recently introduced pigs, a figure approximating 125-150 persons might be reasonable for this particular territory. This gives a density of 2 persons per sq. mile, a characteristic figure for tropical forest tribes.[15]

If the population rose beyond this maximum capacity of the land-technology relationship, groups would either have to fission off, go on the warpath, regulate population by any of a number of internal institutions such as infanticide, or die either from extreme famines or from steady nutritional deficiency. Under present population conditions none of these is necessary, yet both fissioning and population regulation by contraception occur. Fissioning appears to be fostered by the search for settlement locations requiring minimum labor for maximum return and also to establish community authority under the person leading the fissioning group independent of that excercised by the community from which fissioning took place. Contraception appears to be a matter of choice revolving about maintaining a certain freedom from the cares of motherhood until such time as the marriage partners are reasonably convinced that the marriage is permanent. Indirectly, this contributes to the distribution of more effective female producers among the more effective male producers in the most productive areas, since a second marriage often involves shifting to a generally more effective husband whereas a shift to a less effective husband is scarcely to be found. Both fissioning and contraception, however, give evidence of techniques which were developed to handle man-food balance in happier days.

A number of formal characteristics of any ecology may permit us to deduce the form of society which would be expected on the basis of such characteristics. In so far as the ecological forms were to remain essentially unchanged over great periods of time, no changes in the forms of the social order attached to the ecological conditions would be expected. An internal equilibrium is maintained until such time as a dynamic imbalance occurs because of changes from internal or external sources. It is essential to examine to what extent the internal equilibrium prevents or fosters the occurence of dynamic imbalances in any particular ecological setting. We shall return to this question after the following itemization of Yaruro ecological forms.

[15] [for footnote see p. 43, category 116 -- Analyst]

182 241 361 First, through time, the gardens tend to radiate further and further from any given residence point since, given the 13-year planting-fallow cycle, plots near the village will be exhausted. Since the major garden resource areas lie in a crudely east-to-west direction, there will be a slow westward migration of the geographic center of garden activities, enough so that at some point, the village is suspended, as it were, among distant resource points (see Maps), and enhanced by the dispersed nature of the hunting and fishing, and to some extent the gathering, areas. If the "suspension" is weighted more in one direction than another, there will be some tendency either to move the village or to send out temporary or permanent branches of it, respectively in the form of work cottages in the swiddens or in larger long-term house groups which are intermittently occupied. This process is, in fact, easily observed among the Yaruro in existent and abandoned house and subsidiary village sites scattered over the whole territory. Similarly, the locus of gathering, so important in [221] summer, moves further and further from the village. This, together with the considerable shift to fishing and river-hunting in summer, as well as the need for water, causes an extensive seasonal transhumance to occur within the territory. These factors contribute to fissioning as well as to inhibiting the development of permanently located villages, let alone larger aggregations. Thus, with a radiating ecology, a degree of group dispersion and geographical mobility within the territory is to be expected and is indeed characteristic of the Yaruro.

512 Second, if one examines the location of all resources it will be seen that, taken together, they constantly enjoin a dispersal of the labor force in all directions, regardless of season, so that more or less equivalent quantities of labor are being used at the same time in many varying kinds of productive activity independently of each other — at the peripheries of the territory, in the areas between, or in the village centers themselves, [462] where the women are constantly doing the significantly important work of [252] converting otherwise unusable food resources, like raw, bitter manioc or uncooked corn, into edibles.

476 Third, it will be noted that none of the Yaruro technological processes require cooperative work, even when they may permit it, if it were so desired. On the whole, the productive activities might be described as dispersive of labor, whether it is individuals or small groups of twos or threes who go out to keep each other company. Even the work of preparing [241] the swiddens is carried out individually, though two or three men may [463] work as neighbors in what appears as a single plot. Further, the technology is such as to require no highly specific and difficult or esoteric skills. The [242] most difficult skill to acquire is the knowledge of the soil types and appropriate planting procedures attached to each. Thus, each adult is in 462 a position to learn the inventory of technological knowledge appropriate 463 to his or her sex, and somewhat of that belonging to the other sex too, and to apply it by himself whenever he wants or must. A man, well-instructed in Yaruro technology, could probably subsist alone successfully for long periods of time. One divorced adult man, although he was largely fed by his

mother's and sister's households, nevertheless hunted and harvested for himself, and often cooked for himself meals of the type ordinarily cooked only by women. 462 463

The forms and characteristics of surpluses, as defined by Harris, [16] shed further light on the structure of the ecology. The technological surplus, defined as the difference between total calories annually produced by any definable group and the calories used to produce them, or as the ratio between these two figures, may be estimated at about 8 or 9 to 1 as compared with Harris's estimated figures of 2:1 for the Siriono or 33:1 for the Pencuyut Maya. [17] Since as Harris remarks, the degree of social stratification in a large number of cases correlates with the size of the technological surplus, we would scarcely expect to find social stratification among the Yaruro, nor even any significant ranking. Where the technological surplus is low, the producer's surplus, defined as the difference between total calories produced by any given group and the total calories used by the producers for all purposes must also be low. Therefore the number of persons other than producers who can be supported by the producers is also limited. The producers' surplus may provide an index of the degrees of specialization which might be expected. In the case of the Yaruro one would expect no, or very low, specialization. Again, with a low producers' surplus, one would expect to find a greater proportion of the group involved in production than where such surpluses are high, for otherwise there would be insufficient calories to support more than a few people other than the producers. With a low producers' surplus, one would expect, in general, to find a greater proportion of both sexes engaged in the food quest. This is, of course, born out in the case of the Yaruro. Finally, Harris's harvest surplus is defined as the difference between the amount produced at any given moment, especially at seasonal maxima, and the amount consumed at that time. The actual amount consumable is governed by the seasonal *minima*, since the population cannot rise higher than the food supply at minimum periods permits unless special technological features such as storage, are present. Where the harvest surpluses are of non-storable goods, the population level is in equilibrium with the absolute minima of the harvests. The greater the degree of storability through a nonproductive season, or the less marked a crop is by seasonality, the higher the level to which the minimum population can be raised as compared with the number of people supportable at levels of production comparable to those at the time of harvest. Storability, however, is only one dimension of the harvest surplus. Absolute size of the peak surpluses, their regularity over the years, their distribution in space and time in the annual cycle, their utility in raw form, and the proportion of labor needed to harvest them relative to the time allotted for the harvest are all important dimensions of the harvest surplus. Thus, manioc, the Yauro's chief food resource has no clear peak, is regular over the years (the Yaruro disclaim any famines), is storable both in raw form and in prepared forms, is, in the case of the Yaruro, so located as not to permit of a concentration of labor at any one time and needs no massive labor for harvesting because of short harvest periods. Thus, in general, the very nature of manioc as a crop, and the labor requisites for

121 433 182 [56] [463] [462] [262] [251] [241]

A16, 17 [For footnotes see p. 43, category 116--Analyst]

121 182 433 [241] [22] harvesting it, require no centralized authority and render it possible and even probable that the management of production or distribution be carried on without it. The same may be said, on the whole, for all the hunting, fishing, and gathering harvests, a notable and probably permanent feature of Yaruro ecology. Perhaps the only crop which has a marked seasonality is corn, but its absolute size in the total production, its geographical distribution in production, and its position relative to all other harvests renders it insignificant as an effective promoter of managerial functions and [56] formal arrangements of social stratification. It is unlikely, given Yaruro ecology that the forms of surplus would change; consequently their concomitants in social structure would remain constant.

On the basis of the formal characteristics of the ecology and of the surpluses one may deduce an essentially egalitarian social organization, with minimal ranking and leadership and with dispersion of the acts of [56] economic distribution among a number of adult males or females any one of [462] whom may produce a small harvest surplus at any time. With a relatively steady and reasonably comfortable total subsistence base, and with eco- 182 logical arrangements which are spatially repeated in identical form up [582] and down river, no necessity exists for stringent rules of local exogamy as an institution to regulate the labor force by redistributing its members. One would expect frequent marrying in the village according to the convenience of the contractants, and out-marriages to occur either as ecoomic [562] opportunity offered elsewhere or lack of women at home urged one out. The combined biological and productive role of women, with their particularly important technical roles in gathering and in food preparation, suggest sedentary communities and a matrifocal emphasis in the rules of residence. However, the importance and location of the men's economic contribution [591] might be expected to balance this to a degree so that one might deduce male uxorimatrilocal residence but with other, subsidiary patterns. This in fact occurs, occasional male matrilocality or patrilocality [18] comprising the subsidiary residence rules. Political authority would be vested [623] in the community, mainly among its elders, since little or no ranking or stratification is to be expected. In fact, Yaruro socio-political forms, in general, conform to all of these deduced conditions. They represent a model for any society based on the kinds of ecological conditions or form of ecology we have described. Where the ecology is even more restricted the deduced characteristics should be matched even more closely by the observed data. In this respect, the Sirionó for example, tend to confirm the hypo- [171] thesis, in that their partial sedentariness which revolves about horticulture is associated with matrifocal social organization: matrilocality and matrilateral cross-cousin marriage. They also possess autonomous local communities. [19] The Apinayé also tend to confirm the hypothesis. [20]

Where our analysis permits us to predict about the course of the ecological conditions, we should also be able to extend this prediction to the social structure. Since, under the given ecology, we can establish a maximum population for each Yaruro socio-cultural unit, and under the given technology we would expect no significant change in the ecology, no significant

[18,19,20 [for footnotes see pp.43-44 category 116 --Analyst]

TABLE II

FOODS: THEIR GEOGRAPHICAL PROVENIENCES, TECHNIQUES AND SEASONS OF PRODUCTION; THE DIVISION OF LABOR IN PRODUCTION AND FOOD PREPARATION

Symbols: S.F W.S — summer, fall, winter, spring
M F. — male, female
Q — evaluation of the quantitative importance of the food or raw material in Yaruro subsistence and productive activity: 5 — major staple or resource; 4 — major crop, but not a staple; 3 — important food (or other) resource, but a secondary crop; 2 — minor crop (or other resource) serving as a more or less regular but seasonal delicacy; 1 — mostly a delicacy for occasional enjoyment (very secondary resource)
ψ — indicates both presence, and by doubling or tripling importance of crop or resource; three ψψψ's do not necessarily mean "3 times as important as 1 ψ", merely 'of outstanding importance".
/ — sporadically or slightly present
d-m — December to March; a — April; m-s — May-September; o-m — October to November.

	Yaruro	Spanish	English	Location and Techniques	Season of Prod. S d-m	F a	W m-s	S o-n	Division of Labor Prod. M	Prod. F	Food Prep. M	Food Prep. F	Q
CROPS PLANTED:													
	ṵe-ka'ra (x)	yuca amarga	bitter manioc	swiddens, cuttings, dibble	ψψψ	ψψψ	ψψ	ψψψ	ψψψ	ψ	/	ψ..	5
1. p.	ṵo-ka'ra	cachicamo	" (variety?)	as above									
2. p.	a'punda"hi bẹ'mbẹri"a	colibita (?) (blanca)	" (light)	as above									
3. p.	a'punḍ"hi-k'a'Ra	colibita (?) (obscura)	" (dark)	as above									
	'hurari"ä-'pue	yuca dulce	sweet manioc	as above	ψψ	ψψ	ψψ	ψψ	ψψ	ψ		ψψ	4
1. p.	agui'kwẹ	yema de huevo	" (variety?)	as above									
2. p.	ici'kwẹ	pata de zamuro	" (variety?)	as above									
3. p.	valenciana	valenciana	" (", introd)	as above									

(x) Phonetics: ä, etc. = nasalized vowel, ẹ = mid central unrounded vowel, čh = palatal c., y = palatalized fricative, R = flapped r, ṇ = palatalized nasal continuant, as in English sing, j = palatalized affricate, as in English Job.

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Yaruro	Spanish	English	Location and Techniques	Season of Prod. S d-m	F a	W m-e	S e-n	Division of Labor Prod. M	F	Food M	Prep. F	Q
pwɛ	maiz	corn, maize	swiddens, hills, dibble	≠	≠	≠≠≠	≠≠≠	≠≠	≠	≠	≠≠≠	4
1. pume'pwɛ	maiz yaruro	Yaruro corn	as above (3 mo., 1 ear/stalk)									
2. 'hamburu"apwɛ	maiz guahibo	Guahibo corn	as above (4 mo., 2 ears/ ")									
3. p. kwɛ"kwɨa	maiz amarillo	yellow corn	as above (5 mo., 1 ear/stalk)									
'parate"ni	plátano, topocho, banana	plantains, bananas	swiddens, machetes to cut, on specially prepared mounds, slips	≠?	≠?	≠≠≠	≠≠	≠≠	/		≠≠	4
1. p. 'ni	plátano	plantain	as above (raw or cooked)								≠	
2. p. wo'ko	topocho	plantain	as above (raw or cooked)								≠	
3. p. o'kwi	dos millos	banana	as above (raw or cooked)								≠	
4. p. ka'ru	?	plantain	as above (?)								?	
5. ecechu'mɛ p.	guineo (?)	plantain	as above (raw or cooked)								≠	
6. ka'mure "	cambur	banana	as above (raw)									
hu'ra	flame	yams	dry swiddens, dibble	≠?	≠?	≠	≠≠	/			≠≠	2
e'de	patilla	melons, pumpkins, squashes	swiddens dibble	≠≠	≠?	≠	≠≠	≠≠	/		≠≠	3
1. kwɛ"bohurariiede	"	water-melon	as above									
2. chumaniie.	"	pumpkins	as above									
3. 'yako"da	"?	bottle gourd	as above									
cheni'à	caña	sugar cane	wet swiddens, dibble, machete	≠?	≠?	≠≠≠	≠≠≠	≠≠≠	≠	/		3
1. ch. mo'ra	caña ?	" (variety ?)	as above									
2. ch. bɛ'rebɛrɛi"a	caña blanca	white cane	as above									
	caña criolla	introd var.	as above									

Yaruro	Spanish	English	Location and Techniques	Season of Prod. S d-m	F a	W m-s	S o-n	Division of Labor Prod. M	Prod. F	Food Prep. M	Food Prep. F	Q
'ɕɨɾamɛ''kwɨ	ñame	yams	swiddens, dibble	×?	×?	×	×	××	/		×.	2
ôa''ri	batata	sweet potato	as above	×?		×?	×	×××	/		××	2
ô	ananá	pineapple	swiddens, dibble				×	×			/	1
ia	capacho	?	swiddens, ?				×?	×			1	?
ɕɨ'da (=ɕɨda''dakwɨ	ocumo (yauta)	xanthosoma	swiddens, dibble	×?		×	×	×			×	2
(ñô'tɨa''nâ	aji	chili pepper	doubtful if raised on Cinaruco)									
FISHES CAUGHT:												
yagu'pe	agua dulce	?	rivers, caños, hooks, arrows	×				×		/	×	2-
ɾ (='chumachi''ro)	cachama	?	rivers, hooks, arrows	×				×		/	×	1
gui''ɾe	sardina	?	rivers, fish arrows, small hook	×	×	×	×	×		/	×	2
dap'we	guavina	?	caño fishhooks	×			×	×		/	×	?
ho'nô	palambre	?	rivers, caños, arrows, hooks	×?		×	×	×		/	×	2
ip:'â	pinte tigre	?	rivers, caños, hooks	×	×	×	×	×		/	×	2-
pa'chowɨn''ti	bagre	catfish	rivers, caños, hooks	×	×	×	×	×		/	×	2-
'meô''dakwɨ	viejita	?	as above	×	×	×	×	×		/	×	?
'chôânda-''ɣii	"	?	as above	×	×	×	×	×		/	×	?
ninda'ô	"	?	caños, hooks, sardine bait	×	×	×	×	×		/	×	?
uɨi'ri-ka''Rà	" negra	?	caños, hooks	×	×	×	×	×		/	×	?
u'ru-u'ru	de tierra	?	rivers, hooks	×	×	×	×	×		/	×	?
da'ɾe	pavon	?	rivers, hooks, sardine bait	×	×	×	×	×		/	×	?

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Yaruro	Spanish	English	Location and Techniques	Season of Prod. J d-n	F e	M m-a	S d-n	Division of Labor Prod. M	Prod. F	Food Prep. M	Food Prep. F	Q
chu'me	-	?	rivers, caños, hooks, sardine bait, from platform	✓				✓		/	✓	?
'yaka'ra	-	?	as above, also arrows	✓	✓	✓	✓	✓		/	✓	2
Yupuk'e'ne	- colorado	?	rivers, caños, hooks	✓	✓	✓	✓	✓		/	✓	?
áš	curibe blanco	white piranha	rivers, arrows, hooks with especially heavy cord	✓				✓		/	✓	1
(bóde'cia	curibe	piranha	doubtful if caught on Cinaruco)									
(pu'pu	cajarro	catfish	doubtful if caught on Cinaruco)									
FRUITS, ROOTS, AND SEEDS GATHERED:												
t'o'cho	?	?	in mata from big tree, at foot	✓				✓				1?
gu'e (cho'nó)	guayaba	guava	bushes and low trees, distant			✓		✓				1
t'a	fruta de moriche	miriti palm fruit	near caños in wet savana, from foot of trees			✓✓		✓			✓	2
'nunu"be	?	?	?, from big tree (monte?)			✓		✓			✓	?
tam'be	?	?	?, ?			✓						1
tu,to'ui	cardón	tassel (?)	?, from tall trees (prob monte)			✓		✓				1?
ukai'cho	cucuito	?	?, ?			✓						1?
nori"to	?	?	?, ?			✓						1?
ya'kod,	totumo	calabash	monte (?), picked				✓	✓?			✓?	3
ni'pe	chaguango	?	wet savanas, digging stick	✓					✓✓		✓	3
cho'kai	guapo	?	monte, savana, digging stick	✓	✓	✓	✓		✓✓		✓	2

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Yaruro	Spanish	English	Location and Techniques	Season of Prod. E d-m	F a	W m-s	S c-n	M	Division of Labor Prod. F	Food M	Prep. F	Q
'yaera"te	picure	? (agutí?)	monte, caño, fish arrow	✓	✓	✓	✓	✓		?	?	?
'iku"ri	tortuga	tortoise	rivers, fishhooks; on Capanaparo, use detachable arrow	✓✓			✓	✓		?	?	2
poda'me	terecai	terrapin?	rivers, fishhooks " "	✓✓			✓	✓		?	?	2
goda'me	morrocoy	boxturtle	mata, by hand - doesn't run	✓	✓	✓	✓	✓		?	?	1
ci'rida"me	galapago	river turtle	rivers, detachable arrow	✓✓			✓	✓✓		?	?	2
('hôi-obwa"a	chácharo	peta...	doubtful if hunted on Cinaruco)									
(be'ri	manatí	manatee	doubtful if hunted on Cinaruco)									
BIRDS HUNTED:												
ha'we	cotua negro	duck species	rivers, caño, arrows	✓				✓		?	✓	1
hi'na	curetero	?	rivers, lakes, arrows	✓				✓		?	✓	1
andu'ra	garza morena	grey heron	rivers, lakes, arrows	✓				✓		?	✓	1
o'kara	garza blanca	white heron	lakes, arrows	✓				✓		?	✓	1
'huidiga'ra	garza palata	painted heron?	lakes, arrows	✓				✓		?	✓	1
hue	gaviota (?)	?	lakes, arrows, bird arrow	✓				✓		?	✓	1
'kwinchi"ai	perdiz	partridge?	savana, bird arrow (?)	✓				✓		?	?	1-
ha'ra-yu'ra	pavo	curassow	rivers, monte, arrows	✓	✓	✓	✓	✓		✓	?	2
u'ra	jivaro (?)	jivaro stork?	lakes, arrows, shotgun	✓				✓		✓	?	2?
noraha'ra	pato real	duck species	lakes, arrows	✓✓				✓		?	?	?

Yaruro	Spanish	English	Location and Techniques	Season of Prod. S d-m	F a	W m-e	S e-n	Division of Labor Prod. M	Prod. F	Food M	Prep. F	Q
pi'he	cutua	duck species	rivers, caños, arrows	✓✓	✓	✓	✓	✓✓		?	?	27
pou'ni	pato	duck species	doubtful if hunted on Cinaruco)									
MISCELLANEOUS MATERIALS COLLECTED FOR USE IN PRODUCTION:												
ya'ro	espuruna	leaf to wrap and store corn sticks	savana, picking			✓ ?			✓		✓	1
karam'ba	?	cigar wrapping	savana, picking	✓	✓	✓	✓	✓ ?		✓	✓	1
ngam'bi	tabaco	tobacco	savana, picking	✓	✓	✓	✓	✓	✓	✓	✓	1
u'de	curagua, macanilla	macanilla palm	near caños (?) a) for bows, b) for string, fibres for objects	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓✓ ✓		✓✓ ✓✓	✓✓	2 3
chara'i'o	salau (salado?)	canoe wood (?)	montes, for making canoes	✓	✓	✓	✓	✓✓		✓✓		4
cinó't'o	caña brava	cane for arrows	near caños for foreshafts	✓	✓	✓	✓	✓✓		✓✓		4
tu	moriche	moriche	near or in caños, used for making house roofs, baskets, cords, fibres, hammocks	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	5
ago	moriche frond	ditto	as above, often picked up from ground, or tree cut and fronds collected, last for years, may be reused.		as above							
biri't'o-i	guasca	bark strips	montes, caños, for lashing	✓	✓	✓	✓	✓✓		✓✓		3
é-im'bu	cera de abeja	beeswax	near caños, from large trees	✓	✓			✓		✓		1
é-'ke	miel	honey	as above	✓	✓			✓				-
e'ra	peramán	tree wax	as above? for arrows	✓ ?	✓ ?			✓		✓		2

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Yaruro	Spanish	English	Location and Techniques	Food M	Prep F
COOKED DISHES AND THE DIVISION OF LABOR — CONVERSION OF FOODSTUFFS IN VILLAGE					
cham'pe	arepa	corn cakes	kernels crushed after shelling, fried in deep fat or boiled; grater often used	/	♂♂♂
ui'ta	?	corn purée	crushed corn (after frying raw kernels in deep fat, or simply boiling) mixed with water; grater may be used for mashing	/	♂♂♂
pwɛ-u'ni	?	corn powder	dry hard kernels grated on metal grater (men make holes with nails) and then eaten dry	/	♂♂♂
iu	?	corn on cob?	boiled		♂
po'nõ	?	corn kernels	dry, relatively hard kernels are shelled from cob, then roasted in deep fat, salted, and eaten	♂	♂♂
ca'dɛ	capuruna	corn sticks	shelled kernels grated into mush, carefully wrapped in capuruna leaves, boiled; stored or eaten directly	/	♂♂♂
'pwɛ-e"ro	guarapo de maiz	corn juice	kernels are mashed to express juice, thick liquid	♂	♂♂
umbɛ	cazabe	bitter manioc	manioc flower prepared by cutting, grating, squeezing in tipiti, etc.		♂♂♂
1. um'bɛ	cazabe	manioc cakes	flour prepared in flat cakes and roasted		♂♂♂
2. um'bɛ-e'ro	guarapo de cazabe	boiled m. juice	juice is boiled to break down prussic acid	/	♂♂
3. um'bɛ ?	cazato	fermented "	flour and juice added to corn juice, ferments ca. 12 hr.	♂♂	♂
'oka"raru-"o/	huevos	chicken eggs	usually fried		♂
'hurari"à-'pae	yuca dulce	sweet manioc			
1. ?	?	fried slices	fried in relatively shallow fat	/	♂♂
2. ?	?	deep fried	fried in deep fat		♂♂
3. ?	?	boiled	boiled whole after peeling (as above)		♂♂

Yaruro	Spanish	English	Location and Techniques	Food M	Food F	Prep M	Prep F
'parasoná	plátanos, topochos, bananas	plantains and bananas	many types often eaten raw; below are considered only those which are cooked				
1. ?	?	boiled	peeled and put in water to boil till soft	/		✓	
2. ?	?	fried slices	peeled, sliced, put in deep fat till hard			✓✓	
o'bweis	marrano	pork	most of the work of killing and preparing is done, as with most meats, by the men; only boiling is usually done by women who own pots				
1. ?	?	boiled	small chunks boiled till almost mushy	/		✓✓	
2. ?	?	roasted	put on sticks over fire, facing it	✓✓			
3. ?	chicharrones	cracklings	hide with thick layer of fat fried in its own fat till fat (and hide) are hard; stored for some time	✓✓			
4. ?	?	deep fried	meat parts are deep fried till almost crisp			✓✓	
5. ngwei kz"piaks"to	?	blood sausages	blood carefully caught on slaughtering and saved in vessell till coagulated then stuffed into unwashed (?) intestines and cooked	✓✓			
chani"i-e'ro	guarapo de caña	cane juice	squeezed out on "chaqui-chaqui", a wooden hand press	✓		/	

NB—Preparation of foods produced only in the dry summer months, such as changuango root and changuanito savanero root were not observed and are not included here. These roots are both boiled by the women. Most meats, unless boiled, are prepared by the men by roasting. Fish, in general are prepared by women. Most fruits and seeds which are not eaten directly upon collecting are cooked by women.

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along the west-to-east flowing rivers in ribbons some kilometers wide. Most significant fauna and flora of economic use occur in these ribbons. This ecological distribution of resources governs subsistence activities whether they be mainly hunting, fishing, collecting, or horticulture.

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Yaruro subsistence comprises all these activities. (2). Horticulture in the rainy season appears considerably to outweigh all other sources of food together, but in the dry season, hunting, fishing, and collecting perhaps equal or outstrip horticulture. In any case, slash and burn gardening of manioc, corn, plantains, and a number of lesser crops is by far the single most important economic activity. The technology is exceedingly simple in all aspects of
[442]
production, the main tools being the machete and digging stick. The most elaborate technology occurs in the conversion of food into edibles and in the manufacture of hammocks, pottery, objects of wood such as canoes, and woven containers of all types.

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The economic organization displays a sharp division of labor between men's and women's work. Men do all hunting and fishing, make all objects of wood, haul lumber and householding materials, make hammocks, and carry out the heavy labor of gardening. Women do most of the collecting of roots, seeds, and fruits. Since collecting contributes a substantial portion of the food
[222]
supply in summer, woman's contribution, here, is of considerable communal importance. Women's work, a continuous activity from dawn to dusk, is, first, the conversion of raw foodstuffs into edibles. Second, women make all pottery, mats and baskets, the manioc squeezers, and much of the cord used to make hammocks. Another important contribution of women is their help in harvesting in the gardens. Men sometimes help the women with the cookery.

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Men may work alone, in groups of 2 or 3, or in larger groups on rare occasions. No occasion exists for all men to work at a single task since there is no technological need for it. Women's work groups for collecting or householding are of similar size. Work group alignments are often based on choice or
[592]
accident but in other instances coresidence and kinship are determinants. The household, however, constitutes the only really necessary cooperative group for production. The man is a funnel for produce which the woman converts to

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(2) The present description applies to the Cinaruco River Yaruro where the major part of the writer's field work, supported by a grant from the Social Science Research Council, was done. The Capanaparo River Yaruro were reported by Petrullo (1939) and Le Besnerais (1948) as being hunters and gatherers, although Le Besnerais observed small horticultural patches which he claimed were diffusions from Venezuelan farmers which had occurred recently. Le Besnerais in 1954 states directly that they were horticulturalists, omitting any mention of possible diffusions from Venezuelans. The passing mention of horticulture by Fiasson (1947) confirms the present writer in his opinion that, although horticulture may be more restricted on the Capanaparo than on the Cinaruco and Cunaviche-Arauca (where the writer also spent several weeks) which are not discussed at all by Petrullo or Le Besnerais, nevertheless, the absence of horticulture is probably not aboriginal with the Yaruro as has been suggested by Kirchhoff (1948, p. 456). Rather the restricted gardening is a result of ecological conditions on the Capanaparo which are less favorable to horticulture than on the neighboring rivers, combined with extremely violent acculturation, including large-scale massacres of natives. The only other possibility, in my opinion,
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is that horticulture was introduced by the missionaries in the early part of the Eighteenth Century, which is certainly the period when the Yaruro first became acquainted with iron tools (cf Lodares, 1922).

4: Leeds E-5 (1958) 1960 SS19 Yaruro SS19

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make it usable. The need to eat makes woman's work more or less continuous, while the nature of production does not make man's work continuous. As long as there is food in the village, the man may rest, help his wife, or engage in non-food production such as canoe-making, as he chooses. [461]

Objects used by men are men's property and are inherited by the men; objects used by women are women's property and are inherited in the women's line. Immovable property such as gardens and houses are said to be inherited by the decedent's children of both sexes. Male animals such as boars and dogs, are owned by men, the females by women. Thus the division of property is as sharp as the division of labor, a fact reflected throughout the ideology. 428 [422] [231]

No two producers produce the same quantity or inventory of goods, especially as each has great freedom to concentrate in the productive activities he prefers to the exclusion of others. Yet each producer contributes to household and community in what is felt to be equivalent value since most foods are considered good and of equal worth. Each household producing unit distributes supplies of raw or cooked foods to other households along the lines of coresidence and kinship. In this way, all villagers, as consumers, receive the same total amount of food and no one goes without. Thus all persons and households in the community are equivalent as producers, distributers, and consumers. All are tied together in a loosely formalized network of coordinate reciprocal exchanges and obligations in which scales of value are not necessary, since each person contributes approximately equally of all values. In this situation, accumulation of wealth by individuals is out of the question and management of production or of wealth distribution is unnecessary. Consequently, there are no economic status differentiations and no effective leadership among the Yaruro. 433 592 621 [435] [556] [554] [622]

Similarly, no purely social differentiations based on status ranking occur in Yaruro society, except by casual deference to those of age and experience like shamans and village spokesmen, called 'capitans'. The status of women is coordinate with that of men. The complementary and coordinate units, a man and a woman, combine into a series of coordinate but semi-autonomous units, the households. A group of these constitute the Yaruro social unit, the neither endogamous nor exogamous (Murdock's "agamous") village. All these units are tied together by links of bilaterally traced kinship, with coordinate relations on both sides, the ultimate tie being the reciprocal marriage of cross-cousins. Marriage is ideally matrilocal, and occurs most frequently within the village. As a consequence, the most immediate kinship ties in the village are matrilateral, whereas kinship among the men is more diffuse. The villages themselves are tied together by kinship ties, real or imputed, as well as by marriage and visiting, but by no other ties of an all-tribal nature. People who are known to any particular village —to 'us'— are considered part of our village's family, since their kinship ties to our members can be discovered or invented freely. Persons recognized as being of our linguistic and cultural stock will be included under the general term *pumé*, but may not be considered 'of our family' unless the kinship ties are recognized. Thus there is a Yaruro people, but no Yaruro tribal unit. Even the persons included in 'our family' do not constitute a unit, since there are no cross village unifying institutions other than real or imputed bilateral kinship ties. Even these vary from 554 621 [562] [592] 621 [612] [602] [619] [612]